Listing of Claims:

This listing of the claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method for separating ~~at least one~~ morphine from a crude narcotic alkaloid solution using reverse-phase preparative liquid chromatography, comprising:

loading non-polar stationary phase media into a preparative chromatographic column;

feeding a crude narcotic alkaloid solution that includes morphine into the preparative chromatographic column;

applying at least one polar mobile phase to the preparative chromatographic column; and

recovering at least one narcotic alkaloid eluate that includes morphine from the preparative chromatographic column, wherein a loading ratio of a mass of the stationary phase media to the crude narcotic alkaloid solution is in a range from about 1: 1 to about 1: 1000.

2. (Original) The method according to Claim 1, wherein when the stationary phase media is loaded into the chromatographic column, the stationary phase media is suspended in a solution.

3. (Original) The method according to Claim 2, wherein the solution is selected from the group consisting of acetonitrile, water, methanol, ethanol and iso-propanol.

4. (Original) The method according to Claim 1, wherein the stationary phase media is selected from the group consisting of silica, titanium oxide, zirconium oxide and polymer particles.

5. (Original) The method according to Claim 1, wherein the stationary phase media includes components selected from the group consisting of phenyl groups, cyano groups and carbon chains of two (2) to thirty (30) carbon atoms.

6. (Original) The method according to Claim 4, wherein the stationary phase media includes components selected from the group consisting of phenyl groups, cyano groups and carbon chains of two (2) to thirty (30) carbon atoms.

7. (Original) The method according to Claim 1, wherein the stationary phase media includes at least 0.255 kilograms (8.99 ounces) of stationary phase media.

8. (Original) The method according to Claim 1, wherein the stationary phase media includes at least one particle with a size that is in a range from about 1 micrometer (39.4 microinches) to about 200 micrometers (7,874 microinches).

9. (Original) The method according to Claim 1, wherein the stationary phase media includes at least one particle with a size that is in a range from about 20 micrometers (787.4 microinches) to about 50 micrometers (1,968.5 microinches).

10. (Original) The method according to Claim 1, wherein the stationary phase media includes at least one particle with at least one pore, wherein the at least one pore has a size that is in a range from about 30 Angstroms (.12 microinches) to about 1,000 Angstroms (3.94 microinches).

11. (Original) The method according to Claim 1, wherein the stationary phase media includes at least one particle, wherein the at least one particle has a surface area that is in a range from about 100 square meters/gram (3,407 square yards/ounce) to about 1,000 square meters/gram (33,488 square yard/ounce).

12. (Original) The method according to Claim 1, wherein after loading the stationary phase media and prior feeding a crude narcotic alkaloid solution into the chromatographic column, further includes removing fluid from the stationary phase media.

13. (Orignal) The method according to Claim 1, wherein after loading the stationary phase media and prior to feeding a crude narcotic alkaloid solution into the chromatographic column, further includes:

compressing the stationary phase media to create a packed bed; and

flushing the packed bed of stationary phase media with an acidic solution.

14. (Original) The method according to Claim 13, wherein the acidic solution is selected from the group consisting of acetic acid, formic acid, oxalic acid, succinic acid, lactic acid and tartaric acid.

15. (Original) The method according to Claim 1, wherein the crude narcotic alkaloid solution includes crude narcotic alkaloids dissolved in an acidic solution.

16. (Original) The method according to Claim 15, wherein the acidic solution is selected from the group consisting of acetic acid, formic acid, oxalic acid, succinic acid, lactic acid and tartaric acid.

17. (Original) The method according to Claim 1, further includes filtering the crude narcotic alkaloid solution.

18. (Original) The method according to Claim 1, further includes adding a reagent to the crude narcotic alkaloid solution.

19. (Original) The method according to Claim 18, wherein the reagent is selected from the group consisting of triethylamine, tetrabutylammonium hydrogen sulfate, sodium dodecyl sulfate, sodium heptane sulfonate and ammonium sulfate.

20. (Original) The method according to Claim 18, wherein the reagent is 0.5 volume percent to 5.0 volume percent of the crude narcotic alkaloid solution.

21. (Original) The method according to Claim 18, wherein the reagent is 2.0 volume percent to 2.5 volume percent of the crude narcotic alkaloid solution.

22. (Original) The method according to Claim 18, wherein the pH of the crude narcotic alkaloid solution is in a range from about 3.0 to about 3.5.

23. (Canceled)

24. (Original) The method according to Claim 1, wherein a loading ratio of a mass of the stationary phase media to the crude narcotic alkaloid solution is in a range from about 1 to 3 to about 1 to 40.

25. (Original) The method according to Claim 1, wherein a loading ratio of a mass of the stationary phase media to the crude narcotic alkaloid solution is in a range from about 1 to 10 to about 1 to 30.

26. (Original) The method according to Claim 1, wherein the loading of stationary phase media into the chromatographic column includes loading at least 0.255 kilograms (8.995 ounces) of the stationary phase media.

27. (Original) The method according to Claim 1, wherein the feeding a crude narcotic alkaloid solution into the chromatographic column includes feeding at least 0.255 grams (0.009 ounces) of the crude narcotic alkaloid solution.

28. (Original) The method according to Claim 1, wherein the feeding a crude narcotic alkaloid solution into the chromatographic column includes feeding at least 6.38 grams (0.225 ounces) of the crude narcotic alkaloid solution.

29. (Original) The method according to Claim 1, wherein the feeding a crude narcotic alkaloid solution into the chromatographic column includes feeding at least 8.50 grams (0.300 ounces) of the crude narcotic alkaloid solution.

30. (Original) The method according to Claim 1, wherein the recovering at least one narcotic alkaloid eluate from the chromatographic column includes recovering at least 0.255 grams (0.009 ounces) of the at least one narcotic alkaloid eluate.

31. (Original) The method according to Claim 1, wherein the recovering at least one narcotic alkaloid eluate from the chromatographic column includes recovering at least 6.38 grams (0.225 ounces) of the at least one narcotic alkaloid eluate.

32. (Original) The method according to Claim 1, wherein the recovering at least one narcotic alkaloid eluate from the chromatographic column includes recovering at least 8.50 grams (0.300 ounces) of the at least one narcotic alkaloid eluate.

33. (Original) The method according to Claim 1, wherein the recovering at least one narcotic alkaloid eluate from the chromatographic column includes recovering at least one (1) liter (0.264 gallons) of the at least one narcotic alkaloid eluate.

34. (Currently Amended) A method for separating ~~at least one~~ morphine from a crude narcotic alkaloid solution using reverse-phase preparative liquid chromatography, comprising:

loading at least 0.255 kilograms (8.995 ounces) of non-polar stationary phase media into a preparative chromatographic column;

feeding at least 0.255 grams (0.009 ounces) crude narcotic alkaloid solution that includes morphine into the preparative chromatographic column;

applying at least one polar mobile phase to the preparative chromatographic column; and

recovering at least 0.255 grams (0.009 ounces) of at least one narcotic alkaloid eluate that includes morphine from the preparative chromatographic column, wherein a loading ratio of a mass of the stationary phase media to the crude narcotic alkaloid solution is in a range from about 1: 1 to about 1:1000.

35. (Currently Amended) A method for separating ~~at least one~~ morphine from a crude narcotic alkaloid solution using reverse-phase preparative liquid chromatography, comprising:

loading at least 0.255 kilograms (8.995 ounces) of non-polar stationary phase media into a preparative chromatographic column;

feeding at least 6.38 grams (0.225 ounces) crude narcotic alkaloid solution that includes morphine into the preparative chromatographic column;

applying at least one polar mobile phase to the preparative chromatographic column; and

recovering at least 6.38 grams (0.225 ounces) of at least one narcotic alkaloid eluate that includes morphine from the chromatographic column, wherein a loading ratio of a mass of the stationary phase media to the crude narcotic alkaloid solution is in a range from about 1: 1 to about 1:1000.

36. (Currently Amended) A method for separating ~~at least one~~ morphine from a crude narcotic alkaloid solution using reverse-phase preparative liquid chromatography, comprising:

loading at least 0.255 kilograms (8.995 ounces) of non-polar stationary phase media into a preparative chromatographic column;

feeding at least 8.50 grams (0.300 ounces) crude narcotic alkaloid solution that includes morphine into the preparative chromatographic column;

applying at least one polar mobile phase to the preparative chromatographic column; and

recovering at least 8.50 grams (0.300 ounces) of at least one narcotic alkaloid eluate ~~including~~ that includes morphine from the preparative chromatographic column, wherein a loading ratio of a mass of the stationary phase media to the crude narcotic alkaloid solution is in a range from about 1: 1 to about 1:1000.

37. (Currently Amended) A method for separating ~~at least one~~ morphine from a crude narcotic alkaloid solution using reverse-phase preparative liquid chromatography, comprising:

loading at least 0.255 kilograms (8.995 ounces) of non-polar stationary phase media into a preparative chromatographic column;

feeding at least 0.255 grams (0.009 ounces) crude narcotic alkaloid solution that includes morphine into the preparative chromatographic column;

applying at least one polar mobile phase to the preparative chromatographic column; and

recovering at least one (1.0) liter (0.264 gallons) of at least one narcotic alkaloid eluate that includes morphine from the preparative chromatographic column, wherein a loading ratio of a mass of the stationary phase media to the crude narcotic alkaloid solution is in a range from about 1: 1 to about 1:1000.

38. (Currently Amended) The method according to Claim 1, wherein the at least one mobile phase includes an acidic solution ~~and the narcotic alkaloid eluate includes morphine~~.

39. (Original) The method according to Claim 38, wherein the acidic solution is selected from the group consisting of acetic acid, formic acid, oxalic acid, succinic acid, lactic acid and tartaric acid.

40. (Original) The method according to Claim 38, wherein the acidic solution has a pH that is in a range from about 2 to about 5.

41. (Original) The method according to Claim 38, further includes:

adding a caustic solution to the morphine eluate to precipitate morphine; and

separating the precipitated morphine from the caustic solution.

42. (Original) The method according to Claim 41, wherein the caustic solution is selected from the group consisting of sodium hydroxide, potassium hydroxide, ammonium hydroxide and carbonate salts of alkali metals.

43. (Original) The method according to Claim 41, wherein the caustic solution is added to the morphine eluate to adjust the pH in a range from about 8 to about 10.

44-67. (Canceled)

68. (Currently Amended) A method for separating ~~at least one~~ morphine from a crude narcotic alkaloid solution using reverse-phase preparative liquid chromatography, comprising:

loading non-polar stationary phase media into a preparative chromatographic column;

feeding a crude narcotic alkaloid solution that includes morphine into the preparative chromatographic column;

applying at least one polar mobile phase to the preparative chromatographic column;

recovering morphine and codeine from the preparative chromatographic column;

converting the morphine into a synthesized codeine;

feeding a synthesized codeine into the preparative chromatographic column; and

recovering the synthesized codeine from the preparative chromatographic column, wherein a loading ratio of a mass of the stationary phase media to the crude narcotic alkaloid solution is in a range from about 1: 1 to about 1: 1000.

69. (Original) The method according to Claim 68, further includes:

adding a caustic solution to the codeine and the synthesized codeine to precipitate codeine; and

separating the precipitated codeine from the caustic solution.

70. (Original) The method according to Claim 69, wherein the caustic solution is selected from the group consisting of sodium hydroxide, potassium hydroxide, ammonium hydroxide and carbonate salts of alkali metals.

71-150. (Canceled)

151. (Original) The method according to Claim 1, further includes reusing the stationary phase media after all recovering all of the narcotic eluates by driving the impurities back out of a top portion of the preparative chromatography column by applying another mobile phase to the preparative chromatography column.

152. (Currently Amended) A method for separating ~~at least one~~ morphine from a crude narcotic alkaloid solution using reverse-phase preparative liquid chromatography, comprising:

feeding a crude narcotic alkaloid solution that includes morphine into a preparative chromatographic column that includes non-polar stationary phase media;

applying an acidic solution to the preparative chromatographic column;

recovering a morphine eluate, a codeine eluate and then an oripavine eluate from the preparative chromatographic column;

applying at least one organic solvent to the preparative chromatographic column; and

recovering a thebaine eluate and then a narcotine eluate from the preparative chromatographic column, wherein a loading ratio of a mass of the stationary phase media to the crude narcotic alkaloid solution is in a range from about 1: 1 to about 1: 1000.

153. (Previously Presented) A method for separating ~~at least one~~ morphine from a crude narcotic alkaloid solution using reverse-phase preparative liquid chromatography, comprising:

feeding a crude narcotic alkaloid solution that includes morphine into a preparative chromatographic column that includes non-polar stationary phase media;

applying an acidic solution to the preparative chromatographic column, the acidic solution has a pH that is in a range from about 2 to about 5;

recovering a morphine eluate from the preparative chromatographic column;

recovering a codeine eluate from the preparative chromatographic column;

recovering an oripavine eluate from the preparative chromatographic column;

applying a first organic solvent to the preparative chromatographic column, wherein the first organic solvent has a pH that is in a range from about 2 to about 5;

recovering a thebaine eluate narcotine eluate from the preparative chromatographic column;

applying a second organic solvent to the chromatographic column, wherein the second organic solvent has a pH that is in a range from about 2 to about 5; and

recovering a narcotine eluate from the preparative chromatographic column, wherein a loading ratio of a mass of the stationary phase media to the crude narcotic alkaloid solution is in a range from about 1: 1 to about 1:1000.

154. (Currently Amended) A method for separating ~~at least one~~ morphine from a crude narcotic alkaloid solution using reverse-phase preparative liquid chromatography, comprising:

feeding a crude narcotic alkaloid solution that includes morphine into a chromatographic column that includes compressed non-polar stationary phase media;

applying an acidic solution to the preparative chromatographic column, wherein the acidic solution has a pH that is in a range from about 2 to about 5;

recovering a morphine eluate from the preparative chromatographic column;

adding a caustic solution to the morphine eluate to precipitate;

separating the precipitated morphine from the caustic solution;

recovering a codeine eluate from the preparative chromatographic column;

evaporating the codeine eluate to concentrate the codeine eluate;

adding a caustic solution to the concentrated codeine eluate to precipitate codeine;

separating the precipitated codeine from the caustic solution;

recovering an oripavine eluate from the preparative chromatographic column;

adding a caustic solution to the oripavine eluate to precipitate oripavine;

separating the precipitated oripavine from the caustic solution;

applying a first organic solvent to the preparative chromatographic column;

recovering a thebaine eluate narcotine eluate from the preparative chromatographic column;

evaporating the thebaine eluate, that also includes an acetate solution, to concentrate the thebaine eluate;

adding a caustic solution to the concentrated thebaine eluate to precipitate thebaine;

separating the precipitated thebaine from the caustic solution;

applying a second organic solvent to the preparative chromatographic column;

recovering a narcotine eluate from the preparative chromatographic column;

evaporating the narcotine eluate, that also includes acetate, to concentrate the narcotine eluate;

adding a caustic solution to the concentrated narcotine eluate to precipitate narcotine; and

separating the precipitated narcotine from the caustic solution, wherein a loading ratio of a mass of the stationary phase media to the crude narcotic alkaloid solution is in a range from about 1:1 to about 1: 1000.

155-163.(Canceled)